All Databases   PubMed   Nucleotide   Protein   Genome   Structure   OMIM   PMC   Journals   Bool

Search PubMed ▾ for [   ] Go Clear

Limits   Preview/Index   History   Clipboard   Details

Display Abstract ▾ Show 20 ▾ Sort by ▾ Send to ▾

All: 1   Review: 0

About Entrez
NCBI Toolbar

Text Version

Entrez PubMed
Overview
Help | FAQ
Tutorials
New/Noteworthy
E-Utilities

PubMed Services
Journals Database
MeSH Database
Single Citation Matcher
Batch Citation Matcher
Clinical Queries
Special Queries
LinkOut
My NCBI

Related Resources
Order Documents
NLM Mobile
NLM Catalog
NLM Gateway
TOXNET
Consumer Health
Clinical Alerts
ClinicalTrials.gov
PubMed Central

☐ 1: Cancer Res. 1997 Oct 15;57(20):4593-9.   Related Articles, Links

Humanization of an anti-vascular endothelial growth factor monoclonal antibody for the therapy of solid tumors and other disorders.

Presta LG, Chen H, O'Connor SJ, Chisholm V, Meng YG, Krummen L, Winkler M, Ferrara N.

Department of Immunology, Genentech, Inc., South San Francisco, California 94080, USA.

Vascular endothelial growth factor (VEGF) is a major mediator of angiogenesis associated with tumors and other pathological conditions, including proliferative diabetic retinopathy and age-related macular degeneration. The murine anti-human VEGF monoclonal antibody (muMAb VEGF) A.4.6.1 has been shown to potently suppress angiogenesis and growth in a variety of human tumor cells lines transplanted in nude mice and also to inhibit neovascularization in a primate model of ischemic retinal disease. In this report, we describe the humanization of muMAb VEGF A.4.6.1. by site-directed mutagenesis of a human framework. Not only the residues involved in the six complementarity-determining regions but also several framework residues were changed from human to murine. Humanized anti-VEGF F(ab) and IgG1 variants bind VEGF with affinity very similar to that of the original murine antibody. Furthermore, recombinant humanized MAb VEGF inhibits VEGF-induced proliferation of endothelial cells in vitro and tumor growth in vivo with potency and efficacy very similar to those of muMAb VEGF A.4.6.1. Therefore, recombinant humanized MAb VEGF is suitable to test the hypothesis that inhibition of VEGF-induced angiogenesis is a valid strategy for the treatment of solid tumors and other disorders in humans.

Display Abstract ▾ Show 20 ▾ Sort by ▾ Send to ▾

Write to the Help Desk